

Title: DISPOSABLE LINER FOR COOKWARE

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Cross Reference to Related Applications

[0001] The present invention claims priority from U.S. Provisional Patent Application 60/450,495 filed February 27, 2003.

Field of Invention

[0002] The present invention relates generally to the culinary arts, and more specifically, to a cooking liner for use with a crock pot having a single interior cooking chamber or like cooking devices.

Background of the Invention

[0003] Cookware has existed for centuries in many different forms. Over time, cookware has become more technologically sophisticated due to advances in material sciences. Some cookware are even advertised to have special surfaces, or coatings on surfaces, which prevent foodstuff from sticking to the surface. While some cooking devices, such as crock pots, may include a non-stick surface in its interior cooking chamber, there are numerous existing crock pots which do not. In these situations, while crock pots provide even or substantially uniform heat conduction throughout its interior chamber and require minimal electrical energy to operate, some food may burn or otherwise stick to the interior chamber walls making it difficult to scrape off during cleaning. Moreover, crock pots having a conventional ceramic or stoneware interior cooking chamber are still being sold in the market today which do not contain a non-stick surface.

[0004] One of the most common types of containers used in the cooking arts in an cooking vessel (such as an oven) is the aluminum pan or like structure made from a sheet of aluminum foil. Such containers may be preformed into a specific shape, thus avoiding the

labor required for assembly of a shaped article. Such containers, when traditionally used and sold, can be stacked easily since the shape of each container registers with shapes of adjacent containers. Thus, such containers are easy to manufacture, can be manufactured without much expense, and can easily be stored or discarded. The use of aluminum foil containers also have the advantage of being resistant to grease, oil, and water while still permitting appropriate browning of the foodstuff to be cooked. While aluminum foil containers are generally strong and tear-resistant, such containers typically cannot be used as a cooking container in microwave ovens, but are good cooking instruments when used in conventional ovens, barbeques and convection ovens.

[0005] What is needed is a single compartment liner for slow cooking units such as a crock pot that is disposable and which does not interfere with the operation of the crock pot as it operates to cook food. Despite the existence of crock pot liners having other structures, a single compartment liner for cookware is needed to provide a clean cooking environment, and which is simple to manufacture, thereby allowing a cook to prepare meals in the cookware without having the mess associated with such cooking. Such a liner requires simplicity for manufacturing high volumes of liners, and preferably should be readily disposable after use.

[0006] U.S. Patent Application Publication No. US 2002/0038802 A1 discloses a dual compartment aluminum crock pot liner which is suitable for use for simultaneously preparing two or more distinct food items in a crock pot. While the multi-compartment crock pot liner has the advantage of cooking multiple food items at the same time, it also has the disadvantage of simultaneously mixing the flavors of the multiple food items because the steam generated from each food being cooked will be circulated within the crock pot interior chamber, thereby intermixing the steam with the various foods being cooked.

[0007] U.S. Patent No. 6,457,601 B1 discloses a liner suitable for use with a Dutch oven. A Dutch oven is a heavy, cast iron cooking apparatus which is subject to harsh cooking environments. Such cast iron cooking instruments are placed directly in contact with a heat source (such as a fire or charcoal briquettes) and are known to provide unequal or uneven

heat conduction when cooking, thereby leading to inconsistent cooking results. As such, the disclosed liner will be likewise subject to inconsistent heat conduction and burning of food.

[0008] U.S. Patent No. 6,313,446 B1 discloses a cooker system having a liner for crock pots. The liner is disclosed as having a ribbed exterior wall with a question-mark shaped rim designed to hook on to the cooking system rim disclosed therein to provide a seal between the liner and the cooking system lid. This disclosure has the significant disadvantage of sealing the foodstuff being cooked within the liner thereby preventing steam from escaping from the cooking unit and thereby resulting in the cooking system likely exploding due to a build-up of steam pressure within the liner cooking compartment..

Summary of the Invention

[0009] The present invention is a liner for use with crock pots having a single interior cooking chamber and uniform heating characteristics or like cooking devices. The cookware typically has a base with an inner chamber, the inner chamber designed to receive and transmit heat energy to foodstuff through, for example, a ceramic wall. The walls of the cookware inner chamber may be designed in a number of configurations, such as cylindrical, oval or round. The present liner is formed of an energy conductive material, has an exterior surface and an interior surface and is formed to be insertable into, and removable from, the cookware's inner chamber walls so that the liner's exterior surface substantially registers with and adjacent to the cookware's inner chamber walls while allowing steam to escape the crock pot.

[0010] The present invention is a liner for single-chamber crock pots, the liner being preferably formed of a formable heat conducting material which provides good heat conduction, good food browning and is essentially impervious to grease, oil or water penetration. In one embodiment, the present liner is formed of aluminum foil, which is biodegradable and recyclable, thereby allowing ease of use when cooking and ease of cleaning when finished. In another embodiment of the present invention, the liner can be coated with an appropriate non-stick coating (such as, for example, Teflon) to assist in the

liner's ability to create a non-stick food surface for cooking.

[0011] The present invention is inexpensive, durable while cooking and provides good heat transfer efficiency from the crock pot to the foodstuff being cooked, while at the same time eliminating the need for cleaning the crock pot interior chamber. The present invention also provides an inexpensive solution to the problems associated with foodstuff sticking to cookware surfaces.

Brief Description of the Drawings

[0012] Additional aspects of the present invention will become evident upon reviewing the non-limiting embodiments described in the specification and the claims taken in conjunction with the accompanying figures.

[0013] FIG. 1a is a side perspective view of an exemplary embodiment of the present invention;

[0014] FIG. 1b is a detailed side perspective view of the top portion of an exemplary embodiment of the present invention, illustrating the optional liner lip;

[0015] FIG. 2 illustrates an exemplary exploded view of the present invention when used in an circular-shaped crock pot; and

[0016] FIG. 3 illustrates an exemplary exploded view of the present invention when used in an oval-shaped crock pot.

Detailed Description of Exemplary Embodiments

[0017] Systems and methods in accordance with various aspects of the present invention provide a novel single compartment liner for use in a slow cooking unit such as a crock pot.

[0018] As seen in FIG. 1a, the present invention is a cooking liner 30 for use in a slow cook device such as a crock pot or like cookware. The liner 30 preferably has a single cooking chamber within an interior wall and a bottom surface 31, the liner 31 comprising a conductive unitary main body portion integrally formed with an optional flange 37, the main body portion of the liner 30 shaped to substantially register with the crock pot's interior wall surfaces.

[0019] As illustrated in FIGs. 1a-2, the present invention liner 30 is formed by conventional forming methods to have a depth of substantially the same or slightly less than the interior depth of the crock pot's 100 single interior chamber 103, and to have a substantially flat or curved bottom surface that merges smoothly with the all surfaces of the crock pot interior wall 103 so that the overall liner 30 structure registers substantially with the interior chamber of the crock pot. The liner's side walls 31 is preferably formed to lie in a plane substantially coincident with the plane of the interior inner crock-pot walls 101 so that the liner 30 conforms substantially to the configuration of the interior cooking surface of the crock pot 100.

[0020] In one embodiment as seen in FIG. 1b, the liner top rim 35 may be formed with a flange 37 or may be capable of receiving an optional flange 37 which is adapted to allow steam to escape from the cooking unit, thereby allowing the unit to operate as intended. In one configuration, the flange 37 may contain a plurality of ribs such as those found on a traditional pie plate. In another configuration, flange 37 may be simply formed into a roll. The flange 37 or like apparatus is adapted to sit upon the upper portion of the crock pot and to assist the chef to easily insert the liner into, and remove the liner from, the crock pot interior chamber. Similar to the overall design of the liner, the liner rim 35 will also lie in plane substantially symmetrical to the rim of the crock pot, but having a thickness that cooperates with and does not interfere with the operation of the crock pot lid. As those of skill in the art will now appreciate, the flange 37 may be formed with at least one gap or hole to assist in the release of steam from the cooking unit.

[0021] FIG. 2 illustrates an exemplary exploded view of the present invention when used in an circular-shaped crock pot 100. Prior to cooking, liner 130 is placed within the inter single cooking chamber of crock pot 100 so that it registers with interior walls 101. Foodstuff can then be placed inside the interior chamber 131 of liner 130, and cooking commenced when lid 160 is then placed upon the crock pot 100. Optional flange 137 may be formed on liner 130.

[0022] Likewise, FIG. 3 illustrates an exemplary exploded view of the present invention when used in an oval-shaped crock pot 200. Prior to cooking, liner 230 is placed within the

inter single cooking chamber of crock pot 200 so that it registers with interior walls 201. Foodstuff can then be placed inside the interior chamber 231 of liner 230, and cooking commenced when lid 260 is then placed upon the crock pot 200. Again, optional flange 237 may be formed on liner 230.

[0023] While not illustrated, those of skill in the art will come to realize that the present liner invention can also incorporate at least one predefined message which is imprinted thereon for marketing purposes.

[0024] A significant advantage of the present invention is the ability to substantially eliminate the cleaning associated with crock pot use. During conventional crock pot usage, food is slow cooked over time without much attention given to the crock pot by the chef, thereby resulting in foodstuff sticking to the interior chamber walls of the crock pot. With the present invention, after the food is cooked, the chef can easily discard the liner. There is no need to clean the liner, as a new liner can be utilized the next time the crock pot is used. The present invention preferably is formed from a tear-resistant material which substantially eliminates tears, spills and leaks from occurring.

[0025] Embodiments of the present invention can be formed into stackable trays or containers or like shaped articles for use in single container crock pots. The present invention is preferably formed of material which is resistant to oil, water moisture, grease and foodstuff, yet, allow sufficient conduction of energy (such as, for example, heat energy) to be transferred through its structure walls. In another embodiment, the present invention will be designed to allow multiple uses, if necessary.

[0026] The present invention has the advantage that it is easily disposable, easily recyclable and biodegradable. Moreover, due to the tensile strength characteristics of metal foil (such as aluminum, tin, titanium, bronze, brass, copper or any combination thereof), the present invention can readily be shaped to form a food container which registers with the variety of different shaped single-compartment crock pots available on the market today.

[0027] Other variations and modifications of the present invention will be apparent to those of ordinary skill in the art, and it is the intent of the appended claims that such variations and modifications be covered. The particular values and configurations discussed above

can be varied, are cited to illustrate representative embodiments of the present invention and are not intended to limit the scope of the invention.